SU Series Spring Clamp Socket Operating Instructions

Type No. SU4S-11L, SU2S-11L

Read this instruction sheet to make sure of correct operation before starting installation, wiring, operation, maintenance, and inspection of this product. Also make sure that this instruction sheet is kept by end users.
Special electrical expertise is required to install, wire, and operate the SU series sockets. People without such expertise must not use the SU series sockets.

Safety Precautions
All SU Series sockets are manufactured under IDEC's rigorous quality control system, but users must add a backup or failsafe provision to the control system using the SU series sockets in applications where heavy damage or personal injury may be caused in case the SU series sockets should fail.
In this instruction sheet, safety precautions are categorized in order of importance to Warning and Caution:

⚠ Warning: Warning notices are used to emphasize that improper operation may cause severe personal injury or death.

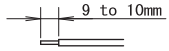
⚠ Caution: Caution notices are used where inattention might cause personal injury or damage to equipment.

⚠ Warning:
- Turn off power to the SU series sockets before starting installation, removal, wiring, maintenance, and inspection of the SU series sockets. Failure to turn power off may cause electrical shocks or fire hazard.

⚠ Caution:
- Use proper wires to meet the voltage and current requirements.
- Make sure that relay and output equipment are connected completely. Incomplete connection may cause overheat, resulting in fire hazard.
- To ensure safety, make sure that all descriptions in the operation instructions are followed strictly.
- Prevent metal fragments and pieces of wire from dropping inside the SU series sockets. Ingress of such fragments and chips may cause fire hazard, damage, or malfunction.
- When disposing of the SU series sockets, do so as an industrial waste.
- Do not disassemble, repair, or modify the SU series sockets.
- Make sure that wires are connected correctly. Incorrect connection may cause malfunction, overheat, or fire hazard.

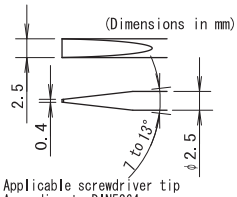
1. Wiring Instructions

Use the following wires for wiring.
Stranded wire: 0.2 to 1.25 mm² or AWG24 to 16
Solid wire: 0.2 to 1.5 mm² or AWG24 to 16
Wire insulation diameter: φ3.15 mm maximum
Strip the wire insulation 9 to 10 mm from the end.



In applications using ferrules for stranded wires, choose the ferrule listed in the table below.
Make sure that an insulation sheath is applied when using the ferrules.
When using stranded wires without ferrules, make sure that the core wires are not loosened.

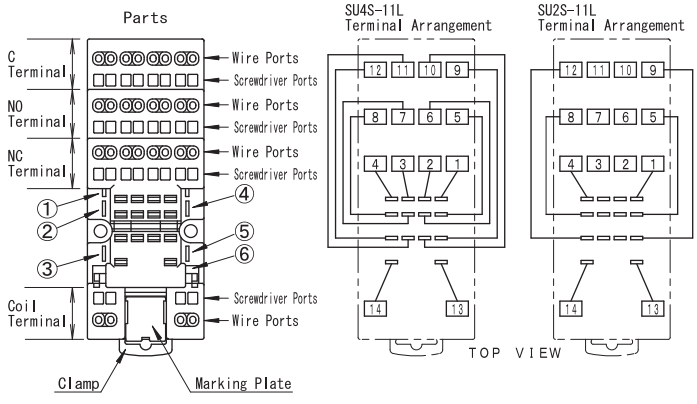
For wiring, use the optional BC1S-SD0 or the following applicable screwdriver.



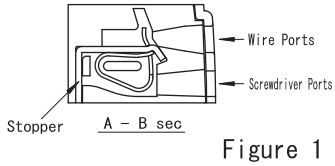
Applicable screwdriver tip
According to DIN5264

Applicable Ferrules			
Applicable Wire (stranded)		Type No.	Manufacturer
mm²	AWG		
0.2	24	AI0.25-12BU	Phoenix Contact
–	22	AI0.34-8TQ	Phoenix Contact
0.5	20	AI0.5-8WH	Phoenix Contact
		AI0.5-10WH	
		TE0.5	NICHIFU CO.,LTD.

2. Parts Description and terminal Arrangement



Spring slots for SFA-101: ①②⑤⑥
Spring slots for SFA-202: ②③④⑤



Note: Two cable ports are provided for each terminal.

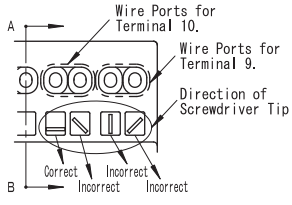
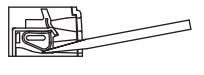


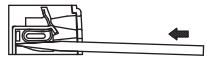
Figure 1

3. Wiring Instructions

3-1 Insert the optional screwdriver (type no. BC1S-SD0) or applicable screwdriver into the square-shaped port as shown on the right, until the screwdriver tip touches the bottom of the spring.
When inserting the screwdriver, make sure that the direction of the tip is correct (Figure 1).

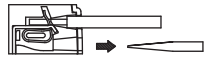


3-2 Push in the screwdriver until it bottoms.
The wire port is now open, and the screwdriver is retained.
The screwdriver does not come off even the hand is released.



3-3 While the screwdriver is retained in the screwdriver port, insert the wire or ferrule into the round-shaped wire port.
One wire port can accommodate one wire or ferrule.
When connecting two wires to one terminal, use the adjoining port of the same terminal (Figure 1).

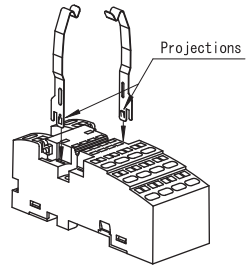
3-4 Pull out the screwdriver. The connection is now complete.



4. Installing the Relay Hold-down Spring

Use the SFA-101 or SFA-202 relay hold-down springs.
Facing the small projections on the two springs each other, press the springs into the applicable slots.
See Table 1 for spring directions and Figure 1 for applicable slots.
Note: The springs cannot be removed once securely installed.

SFA-101 (universal)



SFA-202 (special for IDEC)

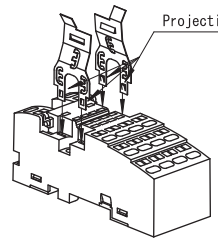
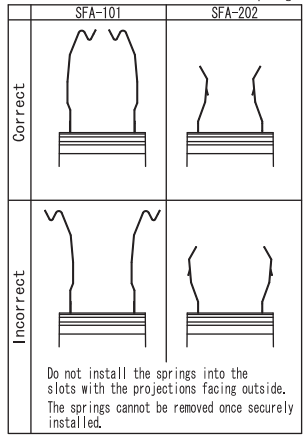
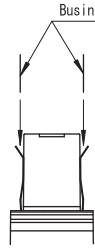


Table 1: Direction of Hold-down Springs

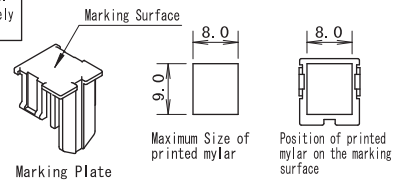

SFA-101
SFA-202
Correct
Incorrect
Do not install the springs into the slots with the projections facing outside.
The springs cannot be removed once securely installed.



To remove the relay, insert a business card-shaped paper between the relay and spring. The relay can be removed easily (SFA-202 only).

5. Marking on the Marking Plate

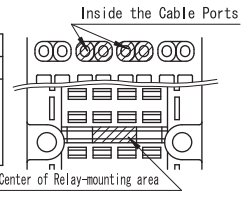
Write markings using an oil-based marker, or paste a printed mylar on the marking surface.
The size of the printed mylar is 8 mm × 9 mm maximum.
See the figures on the right for the maximum size and position of printed mylar on the marking surface.



6. Types

The SU4S-11L and SU2S-11L sockets can be differentiated with the color of plastic parts shown in the figure on the right.

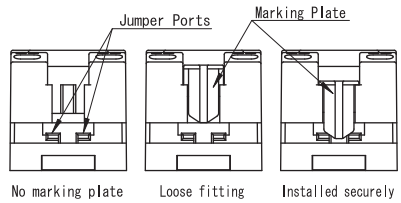
No. of poles	Type No.	Color of plastic parts
4	SU4S-11L	Gray
2	SU2S-11L	Black Note: Wires or ferrules cannot be connected to terminal 2, 3, 6, 7, 10, and 11, because neither springs nor conductive brackets are installed in these terminals.



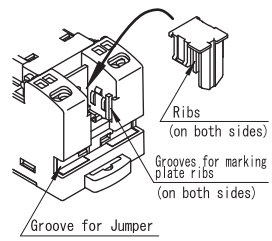
7. Safety Precaution

7-1 Installing the Marking Plate
Because of its removable structure, the marking plate may have fallen from the socket or is loosened when delivered to users.
Make sure that the marking plate is securely installed before starting operation.

⚠ Caution:
- Make sure that marking plate is installed on the socket. The marking plate protects the conductive part, located under the marking plate, by preventing metal fragments or pieces of wire from dropping inside. Ingress of such fragments and chips may cause fire hazard, damage, or malfunction.

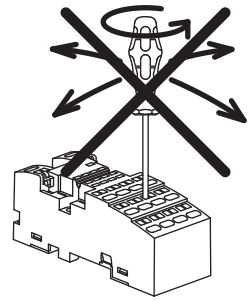


Note: For installation of optional jumper, see the instruction sheet provided with the jumper.



7-2 Inserting Screwdriver into the Wire Ports
Do not tilt or turn the screwdriver while inserted in the screwdriver port.
Wires and ferrules can be connected easily when the screwdriver is inserted and retained.

⚠ Caution:
- Do not tilt or turn the screwdriver while inserted in the screwdriver port, otherwise the socket may be damaged.



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